



## The Power of Preschool

### *Early Investment Yields Solid Returns*

By Kathleen Reich  
Program Officer and Leader, Preschool Grantmaking  
The David and Lucile Packard Foundation

In 1962, 123 low-income, African-American children in Ypsilanti, Michigan began changing the course of American social policy. The children, all 3 or 4 years old, began participating in the Perry Preschool Project. Children in the experiment attended a part-day, school-year program for one or two years, aimed at enhancing their language, math, logical reasoning, and social skills before they entered kindergarten. The theory behind the Perry experiment—a randomized, controlled trial—was that preparing children, especially low-income children, for formal education in the early years would give them a leg up once they entered kindergarten.

That hypothesis proved correct—and dramatically so. The Perry Preschool Project children are now in their 40s, and the benefits of their time in preschool continue to accrue, both to the individuals and to society as a whole. Perry participants fared better in the K-12 education system, repeating fewer grades, needing fewer special education services, and graduating from high school at higher rates than children in the control group. As adults, their earnings were higher, their rates of welfare receipt lower. And they were much less likely to have become teen parents or been convicted of a crime. In 2000 dollars, the Perry Preschool Project invested \$15,166 over two years in each child. By the time those children reached age 40, the economic return to society from the program was \$258,888, or more than \$16 for every dollar invested.<sup>1</sup> (See Figure 1)

Perry helped launch a movement to expand high-quality, publicly-financed preschool for children in the United States, particularly low-income children and increasingly, English language learners. This article describes the research basis for that movement; how leading economists and business leaders have developed a business case for preschool investment; challenges facing pre-K expansion; and efforts in the Federal Reserve's 12<sup>th</sup> District, as well as nationwide, to ensure that more children in the United States enter kindergarten prepared to succeed in school and in life.

### **The Benefits of Early Childhood Education**

Perry helped spark the growth of dozens of publicly-financed preschool programs. The largest is the federal Head Start program, with a budget of \$6.78 billion to serve 909,201 children nationwide in 2006.<sup>2</sup> At least 40 states—including Arizona, California, Nevada, Oregon, and Washington within the Federal Reserve's 12th District—also invest in state-funded pre-kindergarten, mostly for 4-year olds.<sup>3</sup> Most of these programs are targeted to low-income children or children who are defined as “high-risk” for poor outcomes in elementary school, but a few states now guarantee universal preschool for 4-year olds.

As public investment in these programs has grown, so has the evidence base to justify that investment. Perry has long been subject to criticism for its small, relatively homogeneous sample, but evaluations of significantly larger public

## Small Futures

By David Kirp

“Preschool for all”—the slogan sounds great, but unless it translates into a high-quality education for three and four year olds it’s a cruel hoax. Great prekindergartens can make the kind of lifelong differences that have excited economists and others, from police chiefs to CEOs. But bad preschools won’t help kids—indeed, they may even do damage.

It isn’t only the usual suspects, the educators and child psychologists, who are talking up effective pre-kindergarten. Take Lori Taylor, a former Federal Reserve Bank economist. Taylor, who is now an assistant professor at the Bush School for Government and Public Service at Texas A&M, studied the economic impact of pre-k for the Texas legislature. She concluded that preschool is a smart use of public dollars—but only if it delivers high-caliber education. “The increment is well worth spending,” she said. “Invest in high quality and the return is high quality. You get nothing back from substandard programs.”

Just what does quality look like? For a start, it means small classes taught by well-trained teachers who rely on a research-based curriculum, teaching in a preschool that actively engages parents in their children’s education. From North Carolina to California, Oklahoma to Florida, I crouched in pre-k classrooms while writing *The Sandbox Investment: The Preschool Movement and Kids-First Politics*. I watched as children at well-endowed places like the 92nd Street Y in Manhattan and the University of Chicago Lab school busily explored new worlds—but what I witnessed in far poorer communities was exciting and eye-opening.

Walk into Laurence Hadjas’s class at Ray Elementary School in Chicago, and you’ll see the concept of quality come to life. The children represent a Noah’s ark of racial and ethnic diversity, and their teacher, who has come to Chicago via Algeria and France, is a master at her craft.

For much of the day these kids choose what they want to be doing. Hadjas is constantly walking around the room, taking everything in and helping the children solve problems that emerge from their projects. In one corner, four kids are building a bridge with Legos. Seeds are beginning to sprout in a planter box, and in the lie-down nook, a girl leafs through a picture book. Two boys are feeding a bottle to a doll in the doctor’s office. A pottery shard sits in a box of sand; one of the children has brought it in, and Hadjas has recruited an archaeologist from the university to talk about what can be learned from such a piece of clay. There’s a folder full of menus from neighborhood restaurants, and the prices for take-out pizza help kids learn about numbers. Amid the buzz of activity, the room is a picture of order. The children have learned to take their turn, to put their things away, not to mix up the pieces from different games.

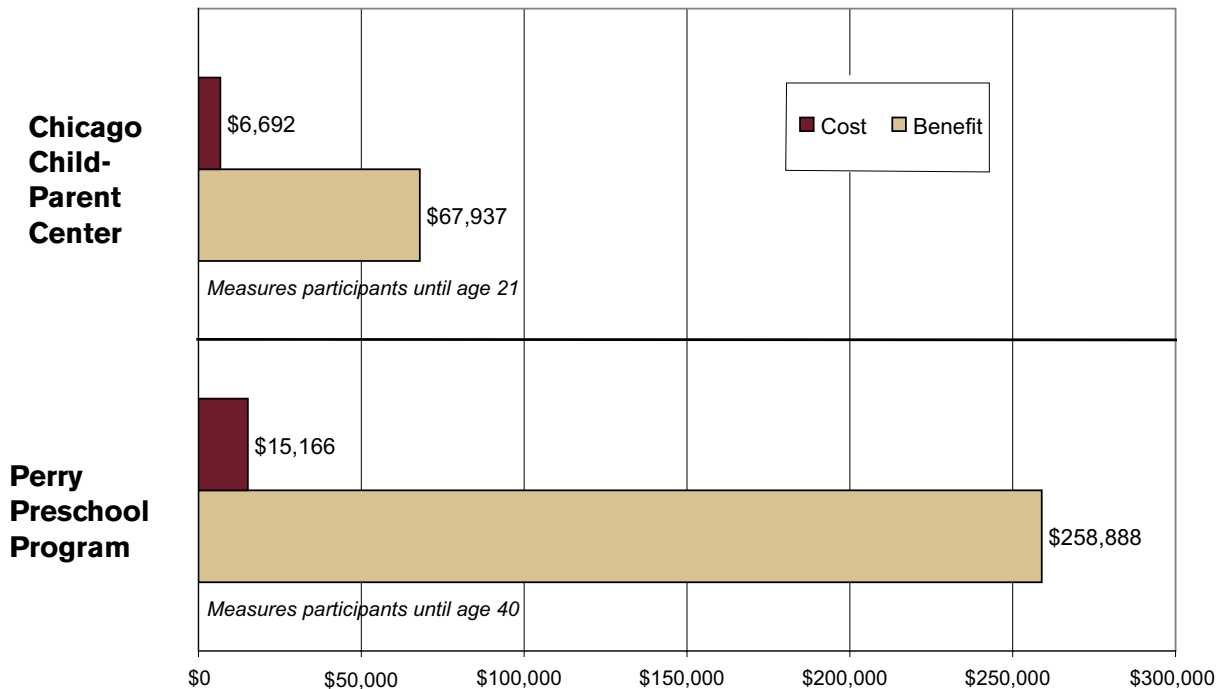
Ideally every three- and four-year-old would get an education as good—as rich and playful, as word-stuffed and idea-filled—as this. It’s not an impossible dream. While Hadjas has an instinctive sense of how kids learn, she believes that “everything I do can be taught to other teachers,” and she spends several evenings a week doing just that.

Hadjas’s classroom is free—part of Illinois’ ambitious publicly financed pre-k program for three and four year olds. It’s just one example of what quality preschool can look like. At the Chicago Child-Parent Centers, whose long-term impact has been amply demonstrated, parents are involved in their children’s education both as learners and collaborators. The centers, in the poor, mainly black and Hispanic neighborhoods of the city’s West Side, each has a room where parents can hang out; classes for parents range from basic literacy and sewing to GED preparation; there’s a class on how parents talk with their children and another for new fathers. The teachers are experienced, and their teaching is language-saturated. “Words, words, words” is the centers’ guiding principle—that makes great sense, for poor kids enter kindergarten having heard tens of millions fewer words than the offspring of professionals.

In Chicago and elsewhere, the best preschools work small miracles. These are the kinds of places that can reshape the arc of children’s lives—that’s what makes prekindergarten, when well executed, a no-brainer public investment.

*David L. Kirp is a professor at the Goldman School of Public Policy, University of California at Berkeley. The Sandbox Investment: The Preschool Movement and Kids-First Politics, earlier excerpted in the New York Times Sunday Magazine, has just been published by Harvard University Press.*

**Figure 1: Costs and Benefits of Two High-Quality Preschool Programs**



Sources: Schweinhart (2004) and Reynolds, Arthur J., et al. (2002). Notes: Chicago Parent Center was calculated as a two-year intervention for this study. Chicago Child-Parent Center presented in 1998 dollars and Perry Preschool Program in 2000 dollars.

preschool programs also have demonstrated impressive results. For example, a study of 1,539 children who began attending the Chicago Parent-Child Centers preschool program at ages 3 and 4 showed that they demonstrated higher cognitive skills, greater school achievement, and less use of school remedial services in early adolescence. They also had significantly higher rates of school completion and lower rates of arrests by age 20.<sup>4</sup>

Most recently, a study of 4-year olds attending the universal preschool program in Tulsa, Oklahoma showed that the children experienced significant cognitive gains, including between 7 and 8 months in Letter-Word Identification and 6-7 months in spelling, compared with children who did not attend.<sup>5</sup> The largest effects were found for Hispanic children, Native American children, and low-income children, although statistically significant effects were found for more economically advantaged children as well.

Taken together, the body of research on publicly-financed preschool programs indicates that preschool is among the more effective educational and social interventions in which policy makers and parents could choose to invest. Upper-income parents have already learned this lesson; most of these families pay for private preschool. But among low- and moderate-income children, rates of attendance are much lower.

Much of the reason for this is economic: the average cost of part-time preschool for one academic year averages

\$4,022 in California, more than the cost of a year attending a California State University full-time.<sup>6</sup> Some private programs charge much more than that, and the RAND Corporation has estimated the cost of providing high-quality part-time preschool in California at about \$5,700 annually.<sup>7</sup> State-funded programs do not come close to meeting the need for preschool even among low-income children. Head Start, for example, serves about 50 percent of eligible children.<sup>8</sup> Preschool is not available to many of the children who need it most: those students who are most likely to be under-prepared for rigorous academic standards of the K-12 educational system.

### Does Preschool Make Good Business Sense?

Although investments in preschool have stagnated at the federal level, states have dramatically increased public funding for state-run preschool programs in recent years. In 2006, 31 states increased funding to early childhood programs, appropriating more than \$450 million in new money, and no state legislature voted to decrease funding to state-run preschool programs.<sup>9</sup> Total funding for state preschool programs now exceeds \$3.3 billion per year nationwide.<sup>10</sup> In many states, this investment has been powered by business leaders and economists, including economists within the Federal Reserve System.

Two of most influential scholars in this area are Arthur

## Pre-K: A Smart Business Investment

*By Carl Guardino, CEO, Silicon Valley Leadership Group*

Silicon Valley businesses, like their counterparts across the state, face a host of critical public policy issues: transportation, housing and energy are a few. There is one, though, that gets scant attention: the need for effective pre-kindergarten for all California children who want it. Just why would the CEO of a business organization such as the Silicon Valley Leadership Group want to get involved in efforts to help 4-year-olds who are decades from entering the workforce? There are many significant answers. Here are three that carry the most weight with me.

First and foremost, better educated children make for a better prepared workforce. The research supports this. Study after study has shown that effective preschool provides children – at an age when they are most capable of learning – with the early academic and social skills they need to succeed in school and later life. If that isn't proof enough, 95 percent of California's kindergarten teachers believe that children who attend preschool have an advantage over those who don't.

Here in Silicon Valley (and elsewhere throughout California), a well-prepared workforce is critical to our ongoing business success. The sectors that have driven that success thrive on a well-educated workforce. Companies in high-tech, the life sciences, biosciences, telecommunications, software, defense and electronics sectors will continue to prosper only if they can continue to find workers with highly developed, highly trained skills and education. And those workers build their skills on a foundation of learning best gained in preschool.

Of course, the business world is not the exclusive beneficiary of effective pre-kindergarten. Our state as a whole is better off when our children are well prepared for their first years in elementary school. Those students will earn more, be healthier and be less involved in crime. And that translates to a safer, richer and more productive society. One RAND study found that every dollar spent in making preschool available to all California 4-year-olds would generate \$2 to \$4 in return. Those dollars come through a combination of the students' – some 500,000 a year right now – earning more over their lives while costing the state less by staying out of prison and off of public assistance.

Then there is this disturbing fact: California is far behind many other states when it comes to providing effective preschool to its children. The state ranks 24<sup>th</sup> in providing access to state-funded pre-kindergarten to its 4-year-olds and 20<sup>th</sup> in the amount of money it spends per preschool student, according to the National Institute for Early Education Research. That group also found the state's preschools meet only 4 of 10 quality benchmarks such as maximum class size, teacher training and established early learning standards.

We do not want to see our state fall any further behind. Our children cannot afford it, and neither can our business community. By investing in preschool, we can keep California business where it belongs: out in front. Pre-kindergarten gets kids ready to read and ready to learn, and when done right, is a proven investment in school success. With it, we can keep our kids out in front, too.

Rolnick, Senior Vice President at the Federal Reserve Bank of Minneapolis, and Nobel Laureate in Economic Sciences James Heckman of the University of Chicago. Rolnick and others argue that, instead of being strictly an educational intervention, preschool should be viewed as an economic development investment—one that significantly outperforms more traditional investments in business and job creation. They also argue that society is significantly underinvesting in preschool, and that preschool investments must be sufficient to produce high-quality programs, where the highest returns have been documented.<sup>11</sup>

Heckman's work focuses on the benefits of preschool (and other interventions in early childhood) that accrue to

the individual worker, and ultimately to U.S. productivity rates as a whole. He points out that 20 percent of American workers are functionally illiterate and innumerate, that these workers create a drag on the economy, and that knowledge and skill gaps develop within the first 5 years of life. "On productivity grounds alone, it appears to make sound business sense to invest in young children from disadvantaged environments," Heckman has written. "An accumulating body of evidence suggests that early childhood interventions are much more effective than remedies that attempt to compensate for early neglect later in life."<sup>12</sup>

Arguments like these have won broad acceptance within the business community. In Florida, former newspaper

publisher David Lawrence led a successful, bi-partisan effort to enact a constitutional amendment guaranteeing the right to preschool for every 4-year old in the state. In California, the late Lewis Platt, former CEO of Hewlett Packard and Chairman of Boeing, appeared in a public service ad promoting preschool, along with billionaire developer Eli Broad. BusinessWeek has named preschool one of its “25 Ideas for a Changing World.” And major philanthropies, including the David and Lucile Packard Foundation and the Pew Charitable Trusts, have invested significant resources to promote preschool expansion in California and nationwide.

## Challenges to Successful Implementation

Despite the strong economic arguments in favor of increased public investments in preschool, particularly for disadvantaged children, significant challenges remain. First, and perhaps most obviously, is funding. Effective preschool does not come cheap. At a time when policy makers and the public are struggling to find the best ways to fix failing public elementary, middle and high schools, it can seem especially daunting to expand that system to encompass pre-kindergarten programs.

Ensuring that preschool programs are of sufficient quality to produce the results shown in the Perry Preschool Project, Chicago, and Oklahoma may be an even more formidable challenge. The National Institute for Early Education Research at Rutgers University has developed a set of 10 quality benchmarks for state-funded preschool programs (See Figure 2); the median score among states in 2005-6 was 6.5, and only two states met all 10 benchmarks.<sup>13</sup>

Finally, the question of who should get to go to public, presumably free preschool remains hotly contested. Advocates of targeted preschool programs argue that the most compelling evidence in favor of these programs comes from studies of low-income children, usually children of color; that these children are the same ones who are likely to experience achievement gaps in school and low earnings in adulthood; and that in an era of limited resources, it makes the most sense to invest public funds in preschool for the children who need it most.

Advocates of universal programs like the ones in Oklahoma argue that all children benefit from high-quality preschool, and that a publicly-funded universal program is the best way to ensure quality and accountability. They also point out that investments targeted to low-income children and families are chronically under-funded, compared with universal programs like Social Security, Medicare, and public education. Finally, they point out that in almost every state, universal public education begins in kindergarten, and few would suggest that parents, not the state, should shoulder the full expense of educating their 5- and 6-year olds. Why, they ask, is educating a 3- or 4-year old all that different? Indeed, in many European countries public education begins at age 4 or younger.

## State Policies that Support Early Childhood Education

In the past year, several states in the Federal Reserve’s 12<sup>th</sup> District have embarked upon expansions of state-funded pre-K:

**Figure 2:** *Quality Standards Checklist by States in the Federal Reserve’s 12<sup>th</sup> District*

Quality Standards Checklist	Arizona	California	Nevada	Oregon	Washington
Comprehensive early learning standards	■		■	■	
Lead teacher B.A. required			■		
Specialized teacher training in pre-K		■	■	■	■
Assistant teacher CDA degree required					■
Teacher in-service (at least 15 hours/year)		■	■		
Maximum class size 20 or lower	■		■	■	
Staff-child ratio 1:10 or better	■	■	■	■	■
Screening/referral and support services				■	■
At least 1 meal/day				■	■
Required monitoring/site visits	■	■	■	■	■

Source: National Institute for Early Education Research, 2006. Alaska, Hawaii, Idaho, and Utah are among the 12 states that NIEER considers not to have a state-funded pre-kindergarten program.



*Highly skilled, well-trained teachers are an essential component of successful preschool programs.*

*Photo courtesy of Preschool California.*

- **Arizona:** In November 2006, voters passed a ballot initiative that will raise \$150 million annually to fund early health and education programs for children 0-5 through a tax on tobacco products. A portion of these funds will go toward preschool.<sup>14</sup>
- **California:** In June 2006, voters rejected a ballot initiative to create universal preschool system. However, later that year the state allocated \$50 million to expand the existing pre-kindergarten program and \$50 million in one-time funds for preschool facilities. Local communities are also investing in preschool; the Los Angeles First 5 Commission has allocated \$600 million over five years to its universal preschool program, LAUP.<sup>15</sup>
- **Oregon:** In 2006, the state increased the Oregon Head Start Pre-Kindergarten program budget by \$13 million to \$41.6 million as part of a two year expansion that would fully fund Head Start in Oregon and serve 80 percent of all eligible three and four year olds.<sup>16</sup> (See Box: The Children's Institute)
- **Washington:** In 2006, the state created a new Department of Early Learning to manage and oversee state-funded early learning programs and launched Thrive by Five Washington, a private-public partnership also designed to expand early childhood services and fund programs to increase school readiness.<sup>17</sup>

Impressive as these investments are, states in other regions of the country have made even greater strides. In Florida, Georgia, and Oklahoma, the state guarantees universal access; any child who wants to attend a state-funded preschool program may do so, free of charge. Florida's program went into effect in 2006, but in Georgia and Oklahoma, where the programs have been in place since the 1990s, about 70

percent of all 4-year olds attend. Other states, including Illinois, New York, and West Virginia, have made legislative commitments to phasing in universal preschool, starting with low-income children first.

## **Conclusion: The Role for Business**

Thanks to the work of the Federal Reserve Bank of Minneapolis and others, preschool is no longer seen as a nice thing to do for low-income kids, or even as simply an important measure for enhancing school readiness. It is now seen, appropriately, as a driver of future worker productivity and economic competitiveness. As policy makers and the public debate whether to expand publicly-financed preschool, and to whom, business leaders can play a critical role on the issue.

Local preschool planning efforts, as well as statewide early learning councils, need business perspectives and active participation. Business leaders can serve as passionate and unexpected champions for preschool investments. And banks in particular can support preschool expansion through thoughtful investments in financing preschool facility construction; in California alone, creating a universal preschool system would require facilities construction and renovation costs of approximately \$2.16 billion.<sup>18</sup>

One thing is certain: today's 3- and 4-year olds are tomorrow's workers, and they must be prepared to compete in an increasingly crowded global marketplace. Preschool gives proven bang for the buck in terms of raising student achievement, increasing worker earnings, and reducing crime. It is not a panacea for the problems facing children in the United States, but it is a solid investment with the potential for years of payoff.

*The author thanks Aimee Eng for her invaluable research assistance on this article.* 

### Back to School

31. A. Rolnick and R. Grunewald, "A Proposal for Achieving High Returns on Early Childhood Development," Working Paper, Federal Reserve Bank of Minneapolis, March 2006. Online at <http://www.minneapolisfed.org/research/studies/earlychild/highreturn.pdf>
32. L. Calman and L. Tarr-Whelan (2005) *Early Childhood Education for All: A Wise Investment*. (New York: Legal Momentum Family Initiative), p. 10.
33. Mitchell, A., L. Stoney, and H. Dichter (2001). *Financing Child Care in the United States*. (Kansas City: Ewing Marion Kauffman Foundation)
34. A. Berube and B. Katz (2005). *Katrina's Window: Confronting Concentrated Poverty Across America*. (Washington, D.C.: The Brookings Institution)
35. Khadduri, J., H. Schwartz, and J. Turnham (2007). *Reconnecting Schools and Neighborhoods: An Introduction to School-Centered Community Revitalization* (Columbia, MD: Enterprise).
36. *Ibid.*
37. *Ibid.*
38. For more information about the ABCD Initiative, see Noni Ramos (2004), "The Next Stage in Childcare Facilities Development," *Community Investments*, 16(1). Online at <http://www.frbsf.org/publications/community/investments/0405/article3.html> or visit <http://www.liifund.org/>.
39. J. Nowak (2006). "Concluding remarks: entrepreneurship in low and moderate income communities," Conference Proceedings, Federal Reserve Bank of Kansas City, Missouri, November 3-4, 2005. Online at <http://www.kansascityfed.org/publicat/commaffrs/15%20Nowak.pdf>.
40. Jump\$tart Coalition (2004). *2004 Jump\$tart Coalition Survey Results*. (Washington, D.C.: The Jump\$tart Coalition for Personal Financial Literacy).
41. National Council on Economic Education (2007). *Survey of the States: Economic and Personal Finance Education in Our Nation's Schools in 2007* (New York: National Council on Economic Education).
42. R. Lerman and E. Bell (2006). *Financial Literacy Strategies: Where Do We Go From Here?* (Washington, D.C.: The Urban Institute).
43. E. Johnson and M. Sherraden (2007). "From Financial Literacy to Financial Capability Among Youth," *Journal of Sociology & Social Welfare* 34(3): 119-145.
44. Beverly, S. T. McDonald, D. Page-Adams and E. Scanlon (2001). *Assets, Health, and Well-Being: Neighborhoods, Families, Children and Youth*. (St. Louis: Center for Social Development). For more research on the lessons learned from children's savings accounts, visit the Center for Social Development's website at [http://gwbweb.wustl.edu/csd/SEED/seed\\_researchpapers.htm](http://gwbweb.wustl.edu/csd/SEED/seed_researchpapers.htm). See also R. Watson and C. Rist (2006). *Banking on SEED: Lessons from Financial Institutions in the SEED Initiative*. (Washington, D.C.: CFED).
45. L. R. Mason, V. Loke, M. Clancy, Y. Nam, Y. Kim, and S. Lo (2007). *SEED Participant Characteristics and Financial Accumulation* (St. Louis: Center for Social Development).

### The Power of Preschool

1. Schweinhart, L., J. Montie, Z. Xiang, W. S. Barnett, C. R. Belfield, and M. Nores (2005), "Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40" (Monographs of the High/Scope Educational Research Foundation, 14), Ypsilanti, MI: High/Scope Press.
2. U.S. Department of Health and Human Services, *Head Start Program Fact Sheet Fiscal Year 2007*. Administration of Children & Families. Office of Head Start. Online at <http://www.acf.hhs.gov/programs/hsb/research/2007factsheet.pdf> (accessed July 14, 2007).
3. "Leadership Matters: Governor's Pre-K Proposals." PreK Now (April 2007). Online at [http://www.preknow.org/documents/LeadershipReport\\_Apr2007.pdf](http://www.preknow.org/documents/LeadershipReport_Apr2007.pdf) (accessed July 16, 2007).
4. Reynolds, A., J. Temple, D. Robertson, and E. Mann (2002). "Age 21 Cost-Benefit Analysis of the Title I Chicago Child-Parent Centers," *Educational Evaluation and Policy Analysis*, Vol. 24, No. 4: 267-303.
5. Gormley, W., T. Gayer, D. Phillips, and B. Dawson (2005). "The Effects of Universal Pre-K on Cognitive Development," *Developmental Psychology*, Vol. 41, No. 6: 872-884.
6. "Paying the Price for the High Cost of Preschool in California." *Fight Crime: Invest in Kids California*. (2006). Online at <http://www.fightcrime.org/ca/preschoolcost/capreschoolcostreport.pdf> (accessed July 11, 2007).
7. L. Karoly and J. Bigelow (2005). "The Economics of Investing in Universal Preschool Education in California." The RAND Corporation: 89. Online at <http://www.rand.org/pubs/monographs/MG349/> (accessed July 31, 2007)
8. Barnett, W. S., J. Hustedt, L. Hawkinson, and K. Robin (2006). "The State of Preschool 2006." National Institute for Early Education Research. Online at <http://nieer.org/yearbook/pdf/yearbook.pdf> (accessed July 31, 2007).
9. PreK Now. (October 2006). "Votes Count: Legislature Action on Pre-K Fiscal Year 2007." Online at [http://preknow.org/documents/LegislativeReport\\_Oct2006.pdf](http://preknow.org/documents/LegislativeReport_Oct2006.pdf) (accessed July 11, 2007).
10. Barnett, W. S., J. Hustedt, L. Hawkinson, and K. Robin (2006).
11. A. Rolnick and R. Grunewald (2003). "Early Childhood Development: Economic Development with a High Public Return." *Fedgazette*. Federal Reserve Bank of Minneapolis, March 2003.
12. J. Heckman and D.V. Materov (2004). "The Productivity Argument for Investing in Young Children: Working Paper 5." Invest in Kids Working Group, Committee for Economic Development, Washington DC, 2004.
13. Barnett, W. S., J. Hustedt, L. Hawkinson, and K. Robin (2006).
14. PreK Now. (October 2006).
15. *Ibid.*
16. PreK Now. (April 2007). "Leadership Matters: Governor's Pre-K Proposals." Online at [http://www.preknow.org/documents/LeadershipReport\\_Apr2007.pdf](http://www.preknow.org/documents/LeadershipReport_Apr2007.pdf) (accessed July 16, 2007).
17. PreK Now. (October 2006).
18. Munger, M., E. Ling, G. Kim and P. Manzo (2007). "California's Preschool Space Challenge: what preschool advocates, parents and policy-makers need to know." Advancement Project. Los Angeles, CA.